

IN THE SPECIFICATION

Please delete paragraphs at page 8, between lines 19-27, as follows:

~~A method is also provided for applying a tattoo to a selected area of skin on an individual's body surface comprising the steps of:~~

~~(a) porating the stratum corneum of the selected area by means that form a micro pore in the stratum corneum without causing serious damage to the underlying tissues and thereby reduce the barrier properties of the stratum corneum to the flux of a permeant; and~~

~~(b) contacting the porated selected area with a composition comprising an effective amount of a tattooing ink as a permeant such that the flux of said ink into the body is enhanced.~~

Please replace the paragraph beginning at page 68, line 17, with the following rewritten paragraph:

The use of micro-lancets that penetrate below the stratum corneum for withdrawing blood are is well known. Such devices are ~~commercially~~ commercially available from manufacturers such as Becton-Dickinson and Lifescan and can be utilized in the present invention by controlling the depth of penetration. As an example of a micro-lancet device for collecting body fluids, reference is made to Erickson et al., International Published PCT Application WO 95/10223 (published 20 April 1995). This application shows a device for penetration into the dermal layer of the skin, without penetration into subcutaneous tissues, to collect body fluids for monitoring, such as for blood glucose levels.

Please replace the paragraph beginning at page 75, line 3, with the following rewritten paragraph:

Each embodiment of the method described herein, for which empirical data ~~have~~ has been collected, has been modeled for at least one set of operational parameters, showing how

stratum corneum ablation can be achieved in a precise and controllable fashion. The output of the simulations is presented graphically in two different formats: (1) a cross-sectional view of the skin showing the different tissue layers with three isotherms plotted on top of this view which define three critical temperature thresholds, and (2) two different temperature-vs-time plots, one for the point in the middle of the stratum corneum directly beneath the target site, and the second for the point at the boundary of the viable cell layers of the epidermis and the underside of the stratum corneum. These plots show how the temperature at each point varies with time as the heat pulses are applied as if one could implant a microscopic thermocouple into the tissues. In addition, the application of this model allows investigation of the parametric limits within which the method can be employed to set the outer limits for two important aspects of the methods ~~perform-nance~~ performance. First, general cases are presented cases that define the envelope within which the method can be employed without causing pain or undesired tissue damage.

Please replace the paragraph beginning at page 77, line 21, with the following rewritten paragraph:

Even with these simplifications used in the model, the correlation between the predicted performance and the empirically observed ~~perform-nance~~ performance based on both clinical studies and histological studies on donor tissue samples is remarkable. The key data to note in FIGS. 31 and 32 are the (a) length of time that the heat pulse is applied[,] and (b) the location of the three different threshold temperatures displayed by the isotherms.

Please replace the paragraph beginning at page 78, line 3, with the following rewritten paragraph:

In FIG. 31, with a pulse length of 21 milliseconds, the 70° C isotherm just crosses the boundary separating the stratum corneum and the viable cell layers in the epidermis. In vitro studies on donor skin samples under these conditions, fifty pulses of thermal energy

delivered 50 milliseconds apart cause detectable damage to this top layer of living cells (see FIG. 30)). However, it was also shown in the in vitro studies that five pulses of heat energy at these same operating parameters[,] did not produce any significant damage to these tissues. It seems reasonable that, even though the nominal damage threshold may have been exceeded, at ~~least~~ first in a transient sense, this temperature must be maintained for some cumulative period of time to actually cause any damage to the cells. Nevertheless, the basic information presented by the simulation is that, if one keeps the "~~on-time~~" "on time" of the heat pulse to less than 20 milliseconds with the flux density of  $400 \text{ Joules/cm}^2$ , then no damage to the living cells in the underlying epidermis will be sustained, even though the ablation threshold isotherm has been moved well into the stratum corneum. In other words, by using a low flux density thermal energy source, modulated such that the "on time" is suitably short, ablation of the stratum corneum can be achieved without any damage to the adjacent cells in the underlying epidermis (see FIG. 30C). This is possible in large part due to the significantly different thermal diffusivities of these two tissues layers. That is, the stratum corneum, containing only about 10% to 20% water content, has a much lower thermal conductivity constant,  $0.00123 \text{ J/(S*cm*K)}$ , than the  $.00421 \text{ J/(S*cm*K)}$  of the epidermis. This allows the temperature to build up in the stratum corneum, while maintaining a tight spatial definition, to the point at which ablation will occur.